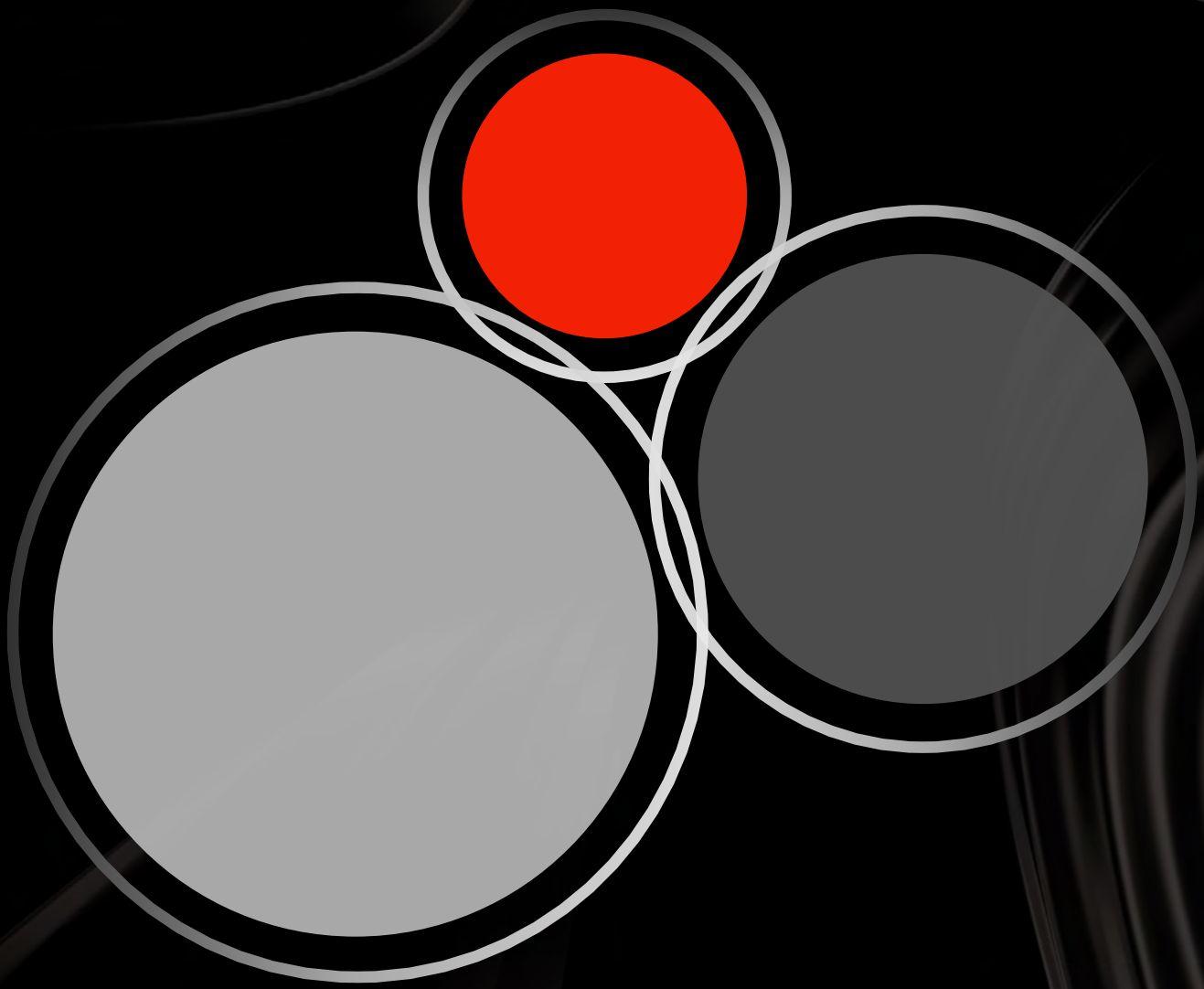
UTS Robotics Institute



A world-leading research institute specialising in autonomous and human-centred robotics technology

ri.uts.edu.au

About the UTS Robotics Institute

At the forefront of robotics innovation, the UTS Robotics Institute stands as a global leader in autonomous and human-centred robotics. Our experts develop customised robotics solutions to maximise productivity, improve quality and safety, and generate efficiencies for our commercial, government and not-for-profit partners.

12 SENIOR ACADEMICS

20 EARLY CAREER RESEARCHERS

50 PHD STUDENTS

75 MAJOR RESEARCH AND INDUSTRY AWARDS

50 KEY PARTNERS

Our expertise

The UTS Robotics Institute specialises in:

Field robotics for sensing, perception and control of intelligent machines in unstructured, complex and hostile environments

Assistive and human interactive robotics to undertake a wide range of tasks across health, mining, infrastructure, defence, space and transport sectors

Enhanced decision making, coordination and control in robot-robot and human-robot teams to execute complex tasks

Intelligent machines for autonomous infrastructure inspection, assessment and maintenance

Bio-inspired robotics for enhanced wall climbing mechanisms and adaptable morphologies for confined or dangerous spaces

- Infrastructure
- Agriculture
- Defence
- Transport and logistics
- Healthcare
- Manufacturing and mining

Our research

Sydney Harbour Bridge maintenance

In partnership with Transport for NSW, we developed three world-first steel bridge maintenance robots. Using cutting-edge intelligent robotics technology, they autonomously sense and map the steel structure, plan their motion, and follow safe paths to conduct inspection and clean surfaces.

Underground pipe condition assessment

Working with Sydney Water, we built innovative remote-controlled robots to accurately assess the condition of sewer and water pipes and built detailed maps. The new technologies transform the way the underground pipe infrastructure is inspected.

Timber construction

This world-first robotics technology allows robots to navigate timber constructions to drill screws into the correct position, developed in partnership with construction company Aurecon and Murdoch University.

Livestock trait estimation

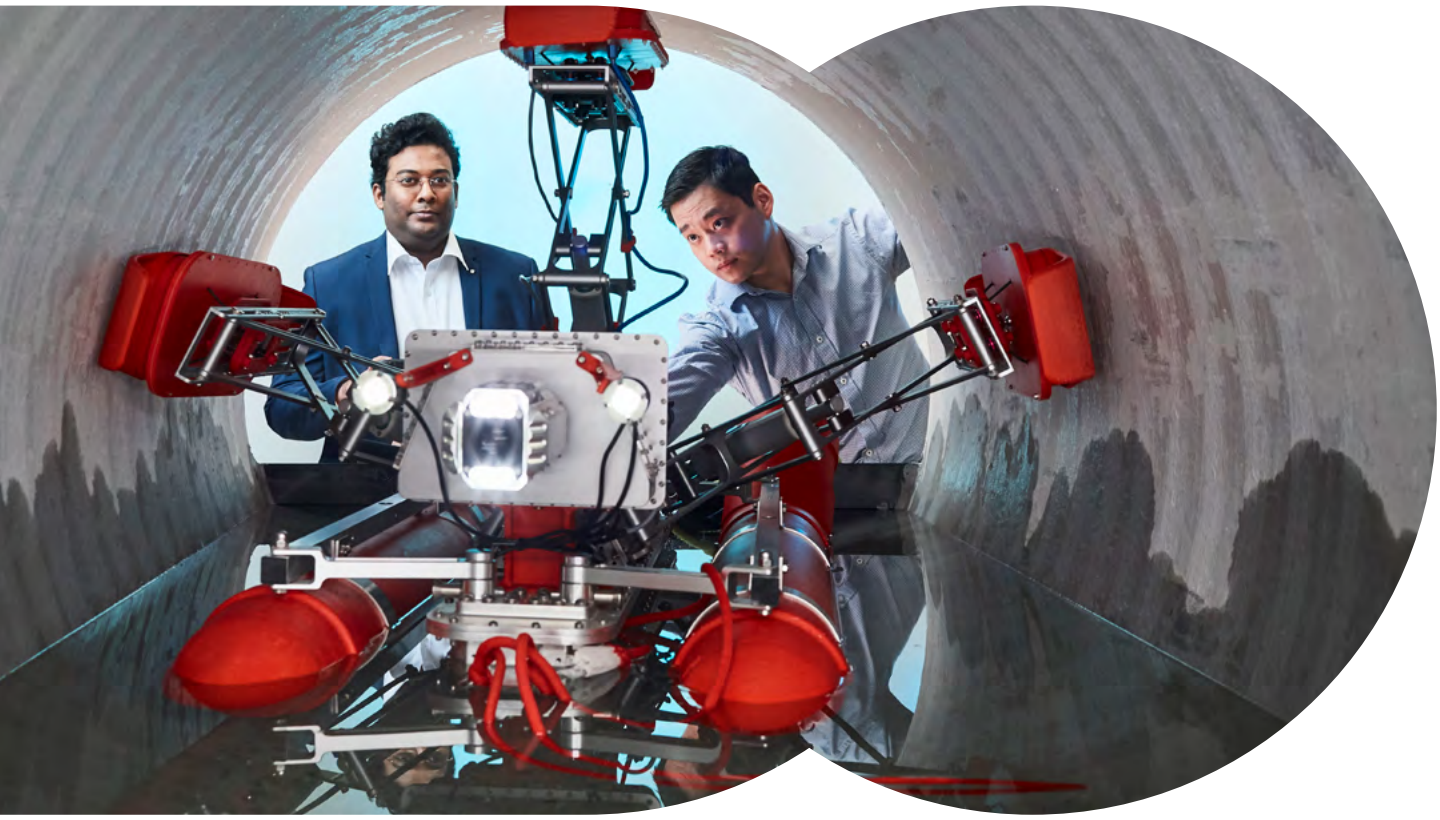
Our experts are working with NSW Department of Primary Industries to improve efficiencies throughout the beef industry with more accurate 3D imaging and objective assessments of various production traits in cattle.

Teams of simple robots

With the Schmidt Oceanographic Institute and University of Sydney, we're using a team of simpler, cheaper robots that coordinate intelligently to monitor coral reefs – doing it faster, cheaper, and more robustly than a single expensive robot.

Surgical robots for hip replacements

In partnership with Concord Hospital, we're developing an intelligent robot system for hip replacement using a less invasive approach and advanced control techniques to achieve high-quality results at a lower cost.

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Our team

With more than 80 researchers, the UTS Robotics Institute is one of the largest robotics research teams in Australia. We have dedicated research teams in infrastructure, agriculture, defence and health.

Our team has leading robotics experts including:

Professor
Sarath Kodagoda
Institute Director

Professor
Shoudong Huang
Deputy Director

Associate Professor
Teresa Vidal Calleja
Research Director

Distinguished Professor
Dikai Liu

Professor
Robert Fitch

“We have world-class researchers, an inclusive culture and excellent facilities that stimulate innovation to deliver impactful research.”

– Professor Sarath Kodagoda

Work with us

Our valuable, cross-disciplinary capabilities are used by companies, organisations and government agencies of all sizes to create practical solutions for real-world problems.

Partners gain access to a range of benefits:

Project expertise of our academic and technical staff, and PhD students

Cutting-edge robotics facilities and labs including UTS TechLab at Botany

Leverage external government and industry funding opportunities

Easy to manage IP agreements and opportunities

ri.uts.edu.au

Connect with us

Contact us to find out more about our robotics capabilities or how you can work with us.

University of Technology Sydney
Robotics Institute

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